

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) An apparatus for producing a chilled or partially frozen beverage comprising:
 - at least one beverage hopper for retaining a quantity of partially frozen beverage;
 - a chilling unit for cooling the partially frozen beverage retained within the beverage hopper;
 - the chilling unit having a portion at least partially extending into the hopper for chilling beverage retained therein;
 - a rotatable mixing member for mixing the partially frozen beverage within the beverage hopper;
 - the rotatable mixing member rotating on a generally horizontally oriented axis defined in the beverage hopper and relative to at least an external surface of the portion of the chilling unit extending into the hopper for moving partially frozen beverage away from the portion of the chilling unit extending into the hopper;
 - a sensor for detecting an occurrence of a rotation reversal condition;
 - a controller for generating a rotation reversal signal in response to the detecting the rotation reversal condition; and
 - drive motor operably coupled to the controller and to the rotatable mixing member for rotating the rotatable mixing member in a first direction and in a second, reverse direction in response to a rotation reversal signal from the controller.
2. (currently amended) A method of mixing a partially frozen beverage within a beverage hopper of a cold drink system comprising the steps of:
 - providing at least one beverage hopper for retaining a quantity of partially frozen beverage;
 - providing a chilling unit for cooling the partially frozen beverage retained within the beverage hopper;

providing a rotatable mixing member for mixing the partially frozen beverage within the beverage hopper;

controllably rotating the rotatable mixing member on a generally horizontally oriented axis defined in the beverage hopper;

providing a sensor for detecting an occurrence of a rotation reversal condition;

providing a controller for generating a rotation reversal signal in response to the detecting the rotation reversal condition; [[and]]

providing a drive motor operably coupled to the controller for rotating the rotatable mixing member in a first direction and in a second, reverse direction;

activating a drive motor to rotate a rotatable mixing member within the beverage hopper in a the first direction;

sensing an occurrence of a rotation reversal condition within the beverage hopper;

generating a rotation reversal signal in response to the sensing of the rotation reversal condition; and

activating the drive motor to rotate the rotatable mixing member in a second, reverse direction in response to the rotation reversal signal.

3. (original) The apparatus of claim 1, the sensor further comprising a temperature sensor coupled to the controller, the temperature sensor detecting the temperature of the beverage in the hopper and providing a temperature detecting signal to the controller.

4. (original) The apparatus of claim 1, the sensor further comprising a torque sensor coupled to the rotatable mixing member and the controller, the torque sensor detecting the viscosity of the beverage in the hopper and providing a torque detecting signal to the controller.

5. (original) The apparatus of claim 1, the sensor further comprising a timer coupled to the controller, the timer detecting a period of time during which the rotatable mixing member is rotated in the first direction and the second direction for controlling the mixing of the beverage in relation to time.

6 (original) The apparatus of claim 1, the rotatable mixing member further comprising an axially rotatable auger for axial rotation relative to the chilling unit extending into the hopper.

7 (original) The apparatus of claim 1, the drive motor further comprising a controllable DC motor coupled to the controller for being controllably driven in a first direction to move the beverage in the first direction and controllably driven in a second direction to move the beverage in the second direction.

8. (original) The apparatus of claim 1, further comprising the chilling unit and the rotatable mixing member being positioned in the hopper in a generally horizontal orientation, rotation of the mixing member in a first direction generally moving the beverage towards the front of the hopper and rotation of the mixing member in a second direction generally moving the beverage away from the front of the hopper.

9. (original) The apparatus of claim 1, further comprising the chilling unit being coupled to the controller for controllably operating the chilling unit to controllably reduce the temperature of the beverage in the hopper.

10. (original) The apparatus of claim 1, further comprising the hopper being formed of a generally transparent material.

11. (original) The method of mixing of claim 2, further comprising
providing a temperature sensor coupled to the controller; and
detecting the temperature of the beverage in the hopper with the temperature sensor; and
providing a temperature detecting signal to the controller.

12. (original) The method of mixing of claim 2, further comprising
providing a torque sensor coupled to the rotatable mixing member and the controller;
detecting the viscosity of the beverage in the hopper with the torque sensor; and

providing a torque detecting signal to the controller.

13. (original) The method of mixing of claim 2, further comprising
providing a timer coupled to the controller;
detecting a first period of time during which the rotatable mixing member is rotated in the first direction; and
detecting a second period of time during which the rotatable mixing member is rotated in the second direction for controlling the mixing of the beverage in relation to time.
14. (currently amended) The method of mixing of claim 2, further comprising
providing an axially rotatable auger; and
axially rotating the auger relative to the chilling unit.
15. (original) The method of mixing of claim 2, further comprising
providing a controllable DC motor coupled to the controller;
controllably driving the DC motor in a first direction;
moving the beverage in the first direction;
controllably driving the DC motor in a second direction; and
moving the beverage in the second direction.
16. (original) The method of mixing of claim 2, further comprising
positioning the chilling unit and the rotatable mixing member in the hopper in a generally horizontal orientation;
rotating the mixing member in a first direction;
moving the beverage towards the front of the hopper;
rotating the mixing member in a second direction; and
moving the beverage away from the front of the hopper.
17. (currently amended) The method of mixing of claim 2, further comprising
coupling the chilling unit to the controller; and

controllably operating the chilling unit to controllably reduce the temperature of the beverage in the hopper.

18. (original) The method of mixing of claim 2, further comprising providing the hopper in a generally transparent material.

19. (currently amended) An apparatus for producing a chilled beverage comprising:

- at least one beverage hopper for retaining a quantity of beverage, the hopper defining at least a front end thereof;
- a chilling unit for chilling the beverage retained in the hopper;
- the chilling unit having a portion at least partially extending into the hopper for chilling beverage retained therein;
- a controller;
- the chilling unit being coupled to the controller for controllably operating the chilling unit to control the temperature of the beverage in the hopper;
- a drive motor associated with the apparatus, the drive motor being coupled to the controller for controllably driving the motor in a first direction and in a second, reverse direction;
- an axially rotatable auger positioned on a generally horizontally oriented axis defined in the beverage hopper and proximate to an exterior surface of the chilling unit, the auger being coupled to the drive motor for controllable rotation along the generally horizontal axis relative to the chilling unit and mixing the beverage in the hopper;
- the chilling unit and the auger being positioned in the hopper in a generally horizontal orientation, rotation of the auger in a first direction generally moving the beverage towards the front end of the hopper and rotation of the auger in a second direction generally moving the beverage away from the front end of the hopper;
- a sensor for detecting a rotation reversal condition, the sensor being coupled to the controller; and
- the controller generating a rotation reversal signal in response to the sensor detecting the rotation reversal ~~condition;~~ condition.

20. (original) The apparatus of claim 19, the drive motor further comprising
a controllable DC motor coupled to the controller for being controllably driven in a first direction to move the beverage in the first direction and controllably driven in a second direction to move the beverage in the second direction.
21. (original) The apparatus of claim 19, the sensor further comprising
a temperature sensor coupled to the controller, the temperature sensor detecting the temperature of the beverage in the hopper and providing a temperature detecting signal to the controller.
22. (original) The apparatus of claim 19, the sensor further comprising
a torque sensor coupled to the controller and at least one of the drive motor and the auger, the torque sensor detecting the resistance of the beverage to movement by the auger and providing a torque detecting signal to the controller.
23. (original) The apparatus of claim 19, the sensor further comprising
a timer coupled to the controller, the timer detecting a period of time during which the auger is rotated in the first direction and the second direction for controlling the mixing of the beverage in relation to time.
24. (original) The apparatus of claim 19, further comprising the hopper being formed of a generally transparent material.
25. (currently amended) A method of mixing a partially frozen beverage within a beverage hopper of a cold drink system comprising the steps of:
providing at least one beverage hopper for retaining a quantity of partially frozen beverage;
providing a chilling unit for cooling the partially frozen beverage retained within the beverage hopper;

providing at least a portion of the chilling unit extending into the hopper for chilling beverage retained therein;

providing a rotatable mixing member for mixing the partially frozen beverage within the beverage hopper;

controllably rotating the mixing member on a generally horizontally oriented axis defined in the beverage hopper relative to at least an external surface of the portion of the chilling unit extending into the hopper for moving partially frozen beverage away from the portion of the chilling unit extending into the hopper;

providing a sensor for detecting an occurrence of a rotation reversal condition;

providing a controller for generating a rotation reversal signal in response to the detecting the rotation reversal condition; [[and]]

providing a drive motor operably coupled to the controller and to the rotatable mixing member for rotating the rotatable mixing member in a first direction and in a second, reverse direction in response to a rotation reversal signal from the controller;

activating a drive motor to rotate a rotatable mixing member within a beverage hopper in a first direction;

sensing an occurrence of a rotation reversal condition within the beverage hopper;

generating a rotation reversal signal in response to the sensing of the rotation reversal condition; and

activating the drive motor to rotate the rotatable mixing member in a second, reverse direction in response to the rotation reversal signal.